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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/023,256	12/18/2001	Rex Eugene Murray	2001U011.US	5082

25959 7590 03/24/2004

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EXAMINER	
BROWN, JENNINE M	

ART UNIT	PAPER NUMBER
1755	

DATE MAILED: 03/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/023,256	MURRAY, REX EUGENE	
	Examiner	Art Unit	
	Jennine M. Brown	1755	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-26 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-26 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 08/19/2002.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1 and 14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 1 and 14, applicants have defined the subscript m as both being an integer from 1 to 3 and also as an integer from 0 to 5. This designator cannot have both ranges. Examiner assumes the designator to be between 0 and 5 since half of the structures claimed have Z_m and half do not.

In claims 1 and 14, applicants have defined T as being able to be Hydrogen but in four of the structures T makes more than one bond. Hydrogen does not bond to more than one molecule and is not found in a natural state as a central atom therefore these structures should be removed or the definition of T should be modified.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1 and 14 are rejected under 35 U.S.C. 102(e) as being anticipated by Cavell, et al. (US 6686491 B2).

Cavell, et al. disclose a catalyst precursor represented by one of the formulas in claims 1 and 14 (col. 2, l. 2-65) and an activating co-catalyst (col. 5, l. 45 – col. 7, l. 46) which are used to make the claimed catalyst.

Claims 1-26 are rejected under 35 U.S.C. 102(e) as being anticipated by Brookhart, et al. (US 6670297 B1).

Brookhart, et al. disclose a catalyst precursor represented by one of the formulas in claims 1 and 14 (col. 3, l. 9 – col. 10, l. 67) and an activating co-catalyst (Ex. 278 – col. 173, l. 27 – col. 174, l. 18; Ex. 280 – col. 174, l. 47 – col. 175, l. 16; Ex. 328-335 – col. 186, l. 58 – col. 187, l. 64; Ex. 403-407 – col. 208, l. 20-55) which are used to make the claimed catalyst. Metals found in groups 3-7 of the Periodic Table of the Elements such as Hf and Zr are disclosed (col. 5, l. 31-32). Anionic ligands are disclosed as well as ionic ligands (col. 8, l. 63-67).

Claims 1-4, 7-17 and 20-26 are rejected under 35 U.S.C. 102(e) as being anticipated by Mackenzie, et al. (US 6660677 B1).

Mackenzie, et al. disclose a catalyst precursor represented by one of the formulas in claims 1 and 14 (col. 4, l. 48 – col. 11, l. 12) and an activating co-catalyst (col. 14, l. 13-30; col. 15, l. 17-39) which are used to make the claimed catalyst (col. 19, l. 13 – col. 20, l. 31; claims 1-5 – col. 73, l. 43 – col. 75, l. 38). Metals disclosed are found in groups 8-10 of the Periodic Table of the Elements (col. 4, l. 50). Group 15 or 16 bridging atoms are disclosed (col. 5, l. 25-28) and ionic weakly coordinating ligands are disclosed (col. 5, l. 34-40).

Claims 1-26 are rejected under 35 U.S.C. 102(e) as being anticipated by Matsui, et al. (US 6593266 B1).

Matsui, et al. disclose a catalyst precursor represented by one of the formulas in claims 1 and 14 (col. 1, l. 52 – col. 11, l. 4; col. 11, l. 25 – col. 12, l. 51; col. 18, l. 35 – col. 88, l. 61) and an activating co-catalyst (col. 16, l. 16 col. 18, l. 20; col. 88, l. 66 – col. 96, l. 17) which are used to make the claimed catalyst (Figure 1). Metals disclosed are found in groups 3 to 11 of the Periodic Table of the Elements (col. 5, l. 16-17) such as Hf or Zr (col. 18, l. 15-16). Bridging groups such as selenium, sulfur, oxygen or nitrogen are disclosed (col. 5, l. 19-22). An ionic or anionic weakly coordinating ligand is also disclosed (col. 10, l. 49-59).

Claims 1-26 are rejected under 35 U.S.C. 102(e) as being anticipated by Sita, et al. (US 6579998 B2).

Sita, et al. disclose a catalyst precursor represented by one of the formulas in claims 1 and 14 (col. 3, l. 16-45; col. 4, l. 18 – col. 5, l. 27; col. 6, l. 1 – col. 9, l. 18; col. 10, l. 35 – col. 11, l. 59) and an activating co-catalyst (col. 3, l. 46-54; col. 12, l. 10-31) which are used to make the claimed catalyst (col. 3, l. 55-57). Metals disclosed are Zr or Hf (col. 3, l. 33). The ligands can be anionic or non ionic based upon the R groups attached (col. 4, l. 40-44).

Claims 1-4, 7-17 and 20-26 are rejected under 35 U.S.C. 102(e) as being anticipated by Brookhart, et al. (US 6489497 B1).

Brookhart, et al. disclose a catalyst precursor represented by one of the formulas in claims 1 and 14 (col. 2, l. 41 – col. 4, l. 4; col. 5, l. 1 – col. 6, l. 39; col. 10, l. 14 – col. 11, l. 27; col. 15, l. 11 – col. 16, l. 67) and an activating co-catalyst (col. 11, l. 28 - col. 12, l. 2) which are used to make the claimed catalyst (Examples 7-23 – col. 18, l. 21-67). Iron is disclosed as the transition metal used (col. 4, l. 64). Both ligands and viny groups are weakly coordinated to the transition metal (Structure V; col. 8, l. 64 – col. 9, l. 3).

Claims 1-4, 7-17 and 20-26 are rejected under 35 U.S.C. 102(e) as being anticipated by Llatas, et al. (US 6586358 B2).

Llatas, et al. disclose a catalyst precursor represented by one of the formulas in claims 1 and 14 (col. 2, l. 18 – col. 40, l. 67) and an activating co-catalyst (col. 41, l. 5-19) which are used to make the claimed catalyst (Example 8, col. 47, l. 53 – col. 48, l. 7). Nickel and palladium are disclosed as transition metals used (col. 2, l. 50). Weakly coordinating ligands are also disclosed (col. 2, l. 51-64).

Claims 1-4, 7-17 and 20-26 are rejected under 35 U.S.C. 102(e) as being anticipated by Moody, et al. (US 6579823 B2).

Moody, et al. disclose a catalyst precursor represented by one of the formulas in claims 1 and 14 (col. 1, l. 58 – col. 6, l. 67) and an activating co-catalyst (col. 11, l. 58 – col. 12, l. 54) which are used to make the claimed catalyst (Example 18, col. 24, l. 3-20; claims 1-5 – col. 30, l. 40 – col. 33, l. 13). Metals selected from groups 8-10 of the periodic table are disclosed (col. 1, l. 60). Weakly and stronger coordinating ligands, olefins and ions are disclosed (col. 3, l. 7-31).

Claims 1-26 are rejected under 35 U.S.C. 102(e) as being anticipated by Moody, et al. (US 6559091 B1).

Moody, et al. disclose a catalyst precursor represented by one of the formulas in claims 1 and 14 (col. 5, l. 43-60; col. 6, l. 5 – col. 8, l. 67; col. 9, l. 39 – col. 22, l. 43; col. 22, l. 55 – col. 39, l. 25; col. 39, l. 40 – col. 49, l. 16) and an activating co-catalyst (col. 58, l. 22 – col. 60, l. 36) which are used to make the claimed catalyst (claims 1, 3-8 – col. 134, l. 11 – col. 138, l. 9). Disclosed metals envisioned are Fe, Co, Ni and Pd (col. 6, l. 49) as well as Ti, Zr or Hf (col.

41, l. 45). The structure represented by XV specifically illustrates the embodiments shown in claims 1 and 14. Ligands Z and R^{3a-i} disclosed are both anionic or ionic (col. 41, l. 50-64).

Claims 1-26 are rejected under 35 U.S.C. 102(e) as being anticipated by Tagge, et al. (US 6544919 B1).

Tagge, et al. disclose a catalyst precursor represented by one of the formulas in claims 1 and 14 (col. 4, l. 64 – col. 8, l. 55; col. 13, l. 5 – col. 22, l. 8) and an activating co-catalyst (col. 8, l. 56-64; col. 22, l. 10 – col. 23, l. 12) which are used to make the claimed catalyst (col. 24, l. 28-43). Figure III is particularly relevant (col. 6, l. 1-15) where B represents a covalent bridging group comprising any of carbyl, silyl, disilyl, germanyl, ammonium, phosphonium (col. 6, l. 18-33) and other ligands are ionic or nonionic (col. 6, . 46-60) and one or more transition metal can be from group IIIA, IVA, VA, lanthanide or actinide (col. 6, l. 43-45) – group IVA is the equivalent to Group 5 of the Periodic Table of the Elements.

Claims 1-4, 7-17 and 20-26 are rejected under 35 U.S.C. 102(e) as being anticipated by Jacobsen, et al. (US 6521561 B1).

Jacobsen, et al. disclose a catalyst precursor represented by one of the formulas in claims 1 and 14 and an activating co-catalyst which are used to make the claimed catalyst (col. 2, l. 42 – col. 5, l. 62; col. 18, l. 17 – col. 33, l. 39). Group A is a coordinating nucleophile or counterion (col. 3, l. 13-15). M is a main group metal and in the table in column 36 is illustrated by Ti, Cr, Mn, Ru, Co and Al. Ligands and bridging substituents disclosed are not limited to amine, imine, amide, phosphoryl, carbonyl, silyl, oxygen, selenium and ester (col. 13, l. 55-67; Structure 102, 104, 110 and 148).

Claims 1-4, 7-17 and 20-26 are rejected under 35 U.S.C. 102(e) as being anticipated by Theopold, et al. (US 6511936 B1).

Theopold, et al. disclose a catalyst precursor represented by one of the formulas in claims 1 and 14 (col. 1, l. 33 – col. 2, l. 57; col. 4, l. 12 – col. 8, l. 17) and an activating co-catalyst (col. 8, l. 18-54) which are used to make the claimed catalyst (col. 8, l. 55-56). The transition metals disclosed are from groups IIIB, IVB, VB, VIB or VIIB of the Periodic Table of the Elements (col. 52, l. 66-67). Beta diiminate ligands are disclosed which are substituted by silyl, hydrogen, branched or unbranched hydrocarbyl groups (col. 52, l. 45-50) and ionic stabilizers are also disclosed (col. 55, l. 1-7; 30-36). Nickel and palladium are disclosed (col. 5, l. 10-13). Substitutents and ligands are disclosed which can be beta diimine complexes, ketones and esters and chelating groups on the ligands can be oxygen, sulfur or selenium (col. 5, l. 49 – col. 6, l. 15)

Claims 1-26 are rejected under 35 U.S.C. 102(e) as being anticipated by Eilerts, et al. (US 6479422 B1).

Eilerts, et al. disclose a catalyst precursor represented by one of the formulas in claims 1 and 14 (col. 3, l. 25-30; col. 3, l. 46-67; col. 4, l. 66 – col. 10, l. 39) and an activating co-catalyst (col. 3, l. 30-35; col. 12, l. 61 – col. 13, l. 30) which are used to make the claimed catalyst (claims 18-40 – col. 24, l. 34 – col. 28, l. 16).

Claims 1 and 14 are rejected under 35 U.S.C. 102(e) as being anticipated by Rix (US 6475946 B1).

Rix disclose a catalyst precursor represented by one of the formulas in claims 1 and 14 (col. 5, l. 63 – col. 9, l. 27) and an activating co-catalyst (col. 2, l. 66 – col. 5, l. 38) which are used to make the claimed catalyst (claims 1-8; col. 16, l. 53 – col. 18, l. 20).

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or

improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 14-26 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-10 of US 6472342 B2. Although the conflicting claims are not identical, they are not patentably distinct from each other because both claim a catalyst composition having a catalyst precursor and an activating co-catalyst. The patented catalyst composition falls into at least one of the 6 structures claimed in the primary claim of the instant application.

Claims 1-14 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-6 of US 6482903 B1. Although the conflicting claims are not identical, they are not patentably distinct from each other because both claim a composition having a catalyst precursor. The patented composition falls into at least one of the 6 structures claimed in the primary claim of the instant application.

Claims 1-26 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-15 of US 6632770 B2. Although the conflicting claims are not identical, they are not patentably distinct from each other because both claim a catalyst composition having a catalyst precursor and an activating co-catalyst. The patented catalyst composition falls into at least one of the 6 structures claimed in the primary claim of the instant application.

Claims 14-26 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-11, 17-18, 21 and 23-27 of US 6472342 B2. Although the conflicting claims are not identical, they are not patentably distinct from each other because both claim a catalyst composition having a catalyst precursor and an activating co-catalyst. The patented catalyst composition falls into at least one of the 6 structures claimed in the primary claim of the instant application.

Claims 1-26 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-29 of US 6660679 B2. Although the conflicting claims are not identical, they are not patentably distinct from each other because both claim a catalyst composition having a catalyst precursor and an activating co-catalyst. The patented catalyst composition falls into at least one of the 6 structures claimed in the primary claim of the instant application.

Claims 14-26 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-5 of US 6660815 B2. Although the conflicting claims are not identical, they are not patentably distinct from each other because both claim a catalyst composition having a catalyst precursor and an activating co-catalyst. The patented catalyst composition falls into at least one of the 6 structures claimed in the primary claim of the instant application.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennine M. Brown whose telephone number is (571) 272-1364. The examiner can normally be reached on M-F 8:00 AM - 6:00 PM; first Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Bell can be reached on (571) 272-1362. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

jmb

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